

1222-2



# CONCRETE MASONRY

## Cinder Building Units





# CONCRETE MASONRY

## Cinder Building Units

**R**EPRESENTATIVE structures in which cinder-concrete masonry units have distinguished themselves are pictured on the following pages. Included are residences, hotels, hospitals, apartment, office and school buildings erected in various sections of the United States. Architects specified cinder-concrete masonry for these structures because they recognize that this permanent building material is structurally sound and economical. Their choice of cinder-concrete units also expresses confidence in the ability of manufacturers to furnish products of uniformly high quality.

Such organizations as the American Concrete Institute, the Building Code Committee of the United States Department of Commerce, the Underwriters' Laboratories and the Building Officials' Conference have developed standard specifications for concrete building units. Strict adherence to these requirements, which are in essential agreement, guarantees products that are reliable and structures that are eminently satisfactory in every respect, from the foundations to the roof-tops.

### Adaptability of Cinder Units

Experience both from building operations and from extensive research work conducted in reliable laboratories is represented in the design of cinder-concrete masonry units. Exceptional flexibility in handling the most intricate construction details is possible because of their efficient size and shape.

The units are regularly used in building all types of exterior and interior walls, either load-bearing or non-load-bearing. Cinder-concrete masonry is especially suitable for partition walls where units of high resistance to fire or breakage, unwarped surfaces and light weight are desired. The soundproof quality of

---

### Integrity Trust Building Philadelphia

*One of the outstanding buildings in which cinder-concrete masonry has been used is the Integrity Trust Building. This 25-story skyscraper, the central structure on the front cover, was designed by A. H. Lavalley, Architect, Springfield, Mass., and built by the George A. Fuller Construction Co., Philadelphia.*

*Cinder-concrete building units were used as backing for the exterior facings of cast stone, brick and terra cotta. Cinder units were also used for fireproofing all columns, elevator shafts and stair enclosures, and for building firesafe partition walls.*

*Other illustrations that depict characteristic construction details of this notable structure are shown on page eleven.*

---

cinder-concrete masonry walls is another outstanding advantage that is responsible for the widespread popularity of this material for all types of building construction.

Cinder-concrete building units are particularly suitable for fireproofing columns, beams and other structural members. The material is also very adaptable for interior construction because nails can be driven into it. Courses of cinder-concrete units work out evenly to window and story heights. Piers, columns and arches are easily built. Framing around door and window openings is a comparatively simple matter. To facilitate construction, structural units such as corner returns and half, jamb, steel

sash and header units are regularly furnished by manufacturers of cinder-concrete masonry.

### Variety of Wall Finishes Possible

Cinder-concrete masonry construction permits an unusually wide range of exterior and interior finish. For example, the units provide a sturdy base for portland cement stucco or interior plaster. When applied on cinder-concrete masonry these materials become an integral part of the wall because both are portland cement concrete.

An excellent backing for cast stone, natural stone, brick, terra cotta or other facings is provided by cinder-concrete masonry. The units lay up rapidly, provide good insulation and impart great strength and rigidity to the wall. Accurate bonding with courses of face brick is simplified because cinder-concrete units are multiples of standard brick sizes. In addition, manufacturers furnish special header units that facilitate bonding without cutting.

Exposed cinder-concrete masonry, with well-pointed mortar joints, is pleasing and effective for many types of surfaces. Attractive exterior or in-



terior wall treatments in which the characteristics of the masonry are retained are produced by a thin brush coat of portland cement and water mixed to the consistency of paint, or through the use of special cement paint. Special care taken to cure the surface thoroughly immediately after the paint has set up enough to prevent washing will produce a durable, hard and attractive surface. A very fine fog spray is best for applying the curing water.

### Complete Protection Against Fire

Cinder-concrete masonry provides maximum fire-safety. Numerous tests in laboratories and in actual fires have definitely established that cinder-concrete building units will successfully withstand intense heat. The heat passes through the walls very slowly. These tests have justified the extensive use of cinder-concrete masonry in all types of firesafe construction. This fire-resisting, structurally sound material is especially suitable for fireproofing structural frames in large buildings, for partition or fire walls, elevator shafts and enclosed fire-escapes. In small homes, pretentious residences, in hotels, apartments, churches, schools, hospitals, garages, office, mercantile and industrial buildings, the use of cinder-concrete masonry guarantees full protection against the dangers of fire.

### True Construction Economy

The architect is interested in the freedom with which a building material lends itself to design. The builder is interested in the availability of the material and the ease with which it can be used on the job. The average owner, while considering all of these things, is primarily interested in having the structure meet the requirements for which it is built. All of them—architect, builder and owner—are especially concerned with economy. While fulfilling the exacting artistic and structural re-

quirements of the architect and builder, cinder-concrete masonry excels in the matter of construction economy. Although labor and material prices are likely to vary in different localities, usually it will be found that, quality considered, the cost of cinder-concrete masonry is surprisingly moderate.

The initial cost of cinder-concrete masonry is often but little more than for much less permanent construction. The uniform size, efficient design and light weight of cinder-concrete building units permit rapid laying in the wall, and a relatively small amount of mortar is required. Consequently an appreciable saving is effected both in labor and the materials required for mortar.

True construction economy, however, involves more than the first cost of the structure; it takes into consideration such items as the rate of depreciation and the expenditures necessary to keep the building in good repair. In this respect cinder-concrete masonry construction manifests an appreciable saving to the owner. The long life of practically maintenance-free service that is possible with cinder-concrete

masonry makes it a decidedly economical building material for all types of construction.

### A Superior Building Material

The many characteristics which make cinder-concrete masonry a superior building material have evoked praise from those who have used the units for translating inspiration into actuality, completely and without excessive cost. No matter what the size or character of the structure, whether it is a \$4,000 bungalow, a \$50,000 residence or a building with proportions limited only by design and convenience, cinder-concrete masonry is an ideal building material. Common hazards of fire or storm and the inroads of time or weather lose their menace for structures built of cinder-concrete units.



*A splendid suburban residence in Detroit, Michigan, with walls of cinder-concrete block, covered with textured portland cement stucco, the finish coat a buff color. Designed and built by Murphy Land and Building Company.*



## OUTSTANDING BUILDINGS



(Left) *The Security Building, Denver, Colorado, an outstanding structure with lightweight partition walls built economically of cinder-concrete masonry. Fisher and Fisher, architects. Alex Simpson, Jr., was the contractor.*

(Below) *The Barclay Apartments, Philadelphia, Pennsylvania. To provide firesafety and economical construction, 175,000 cinder-concrete building units were used for partitions and for fireproofing all columns. J. E. R. Carpenter, architect. United Engineers and Constructors, Inc., were the contractors.*



*The Continental Oil Building, Denver, has firesafety built-in through use of cinder-concrete masonry partition walls and fireproofing for structural frame. William N. Bowman Co., architects. Gordon M. Tamblyn, contractor.*





## OUTSTANDING BUILDINGS

More than 250,000 cinder-concrete building units, which are permanent, firesafe and light in weight, were required in the erection of the two outstanding buildings shown on this page.



(Above) *Mountain States Telephone and Telegraph Building, Denver, Colorado. Cinder-concrete masonry partition walls protect the interior of this \$3,000,000 structure against fire. These walls are also soundproof. William N. Bowman Company, architects. C. E. Walker Construction Company, contractors.*

(Left) *The Westbury Apartments, Philadelphia, Pennsylvania. This building has permanent cinder-concrete masonry walls faced with brick. All columns are protected with cinder-concrete masonry fireproofing. Hahn and Baylinson, architects. Foundation Company, contractors.*



## SCHOOL BUILDINGS



*John Harris Senior High School, Harrisburg, Pennsylvania, a structure that is fully firesafe, with cinder-concrete masonry back-up for brick facing. C. J. Lappley, architect. C. W. Strayer, builder.*



*(Left) North Bergen Grade School, North Bergen, New Jersey. Over 200,000 cinder-concrete building units were used for backing brick exterior walls and for fire-safe, soundproof partitions. Hensel and Wier, architects. Bower and Millimet were the contractors.*

*(Right) Rutherford High School, Rutherford, New Jersey. This attractive building has cinder-concrete masonry walls faced with brick.*



*William Penn Senior High School, Harrisburg, Pennsylvania. This well-built \$1,500,000 building has firesafe partition walls of cinder-concrete masonry. Charles H. Lloyd, architect. C. W. Strayer, builder.*



## CLUB, HOTEL AND HOSPITAL BUILDINGS



*Eagles Club Building, Milwaukee, Wisconsin, an exceptionally beautiful structure with cinder-concrete masonry walls faced with stone and cinder-concrete masonry partition walls. Russell Barr Williamson, architect. Immel Construction Company, contractors.*



*Hotel Cosmopolitan, Denver, Colorado, in which 350,000 cinder-concrete building units were used for backing up walls of brick and for all partitions. William N. Bowman Co., architects. Gordon M. Tamblin, contractor.*



*Harper Hospital, Detroit, Michigan, which is safe against fire and is soundproof because cinder-concrete masonry units were used for building the partition walls. Albert Kahn, architect. Bryant and Detwiler were the contractors.*



## HOTEL BUILDINGS



(Left) *The Ambassador Hotel, Kansas City, Missouri, which has cinder-concrete masonry walls faced with brick. Cinder-concrete building units were used in all partitions. Nelle E. Peters, architect. Quality Builders, Inc., were the contractors.*

(Below) *Pontchartrain Hotel, New Orleans, Louisiana, which has fire-safe cinder-concrete masonry walls throughout, the units having been used for back-up and partitions. Weiss, Dreyfous and Seiferth, Inc., were the architects.*



*Wall Whitman Hotel, Camden, New Jersey. Cinder-concrete units were used as back-up for brick facing, for tile and joist floors, and in all partitions. Designed and built by H. L. Stevens and Company.*





## REPRESENTATIVE CONSTRUCTION

*(Right) Riverview Manor Apartments, Harrisburg, Pennsylvania. The sturdy, firesafe walls of this building are cinder-concrete masonry faced with brick. Partitions are built of cinder-concrete building units. Designed and built by Clayton J. Lappley, architect.*



*(Below) Hartwood Farm, Dorseyville, Pennsylvania, one of the finest examples of permanent, firesafe farm building construction in the country. Cinder-concrete masonry has been used throughout. Alfred Hopkins, architect. J. H. Fetterman Company was the builder.*





## CINDER-CONCRETE MASONRY RESIDENCES



*(Left) Residence at York, Pennsylvania. Colored portland cement stucco artistically applied, dignified lines and generously proportioned rooms are features of this interesting home built of cinder-concrete masonry. H. E. and R. B. Yessler were the architects.*

*(Right) Residence at Washington, D. C. An attractive small suburban house built of cinder-concrete block, covered with textured portland cement stucco. This home is safe against the ravages of time, fire and weather.*



*(Left) In this residence at Wauwatosa, Wisconsin, the foundation, exterior and partition walls are of cinder-concrete units. Outside walls are faced with brick. The basement houses a laundry, two-car garage, boiler and storage rooms, and a recreation and billiard room. Hugo Logemann, architect.*



# THE INTEGRITY TRUST BUILDING



*Plaster is applied directly to the interior walls of cinder-concrete masonry.*



*Cinder-concrete masonry filler walls and fireproofing in interior of the building.*



*(Left) Cinder-concrete masonry back-up for exterior walls of brick. Note course of header units which facilitates bonding of facing.*



*(Right) Cinder-concrete masonry fireproofing for structural columns. Spaces between flanges are filled with cinder-concrete brick and the entire column is then encased with solid cinder-concrete units.*

*(Right) Cinder-concrete units being used as backing for cast stone—the exterior facing of the lower stories of the Integrity Trust Building shown on the front cover.*



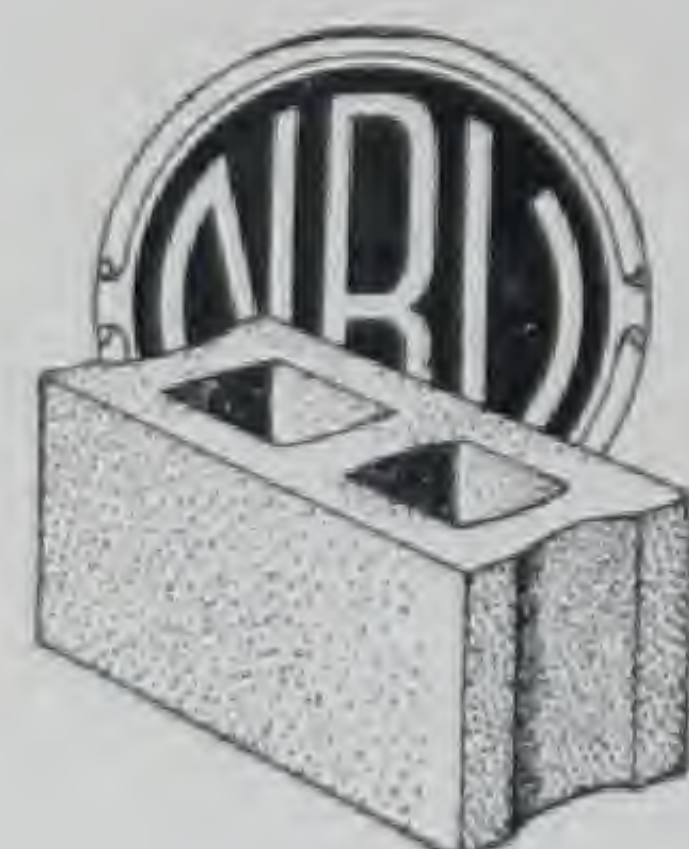
*(Left) An interior column fireproofed with cinder-concrete building units. Note the corner beads nailed to the block to provide true corners for the plaster which is applied directly to the masonry.*



# ALL CINDER CONCRETE BUILDING UNITS

*used in the buildings illustrated in this booklet  
were manufactured under the*

## STRAUB OR BO PATENTS



A responsible product is always made by responsible men. Builders and architects do not maintain Testing Laboratories to protect themselves against inferior building materials. They buy products which are backed by responsible organizations.

The Cinder Unit Industry, under the direction of National Building Units Corporation, is national in its scope. Architects situated in New York or Denver, Toronto or Atlanta—in each of the more than eighty cities where Straub and Bo plants are located—know that they protect their clients when they specify Straub or Bo Cinder Units.

Local manufacture and distribution of these products are carefully conducted by this company. A large stock of cinder units, of every size and for every building purpose, is constantly maintained to insure immediate delivery of well-cured products.

## NATIONAL BUILDING UNITS CORPORATION

1600 Arch Street

::

PHILADELPHIA, PA.

The term *concrete masonry* is applied to block, brick, or tile building units molded from concrete, and laid by a mason in a wall. The concrete is made by mixing portland cement with water and other suitable materials called aggregates. Concrete masonry using units made of cinder aggregate is described in this booklet.